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**From:** Harry Stewart [hstewart@normandeau.com]  
**Sent:** 3/19/2018 4:16:46 PM  
**To:** Groff, Kimberly (DEP) [Kimberly.Groff@MassMail.State.MA.US]; Voorhees, Jeanne [voorhees.jeanne@epa.gov]  
**CC:** Debbie Rutecki [drutecki@normandeau.com]  
**Subject:** PowerPoint Question for EPA/DEP Meeting March 20, 2018, 10AM - Phase II Marine DO criteria- Chocorua Conference Room on the 7th floor

Jeanne,

Will you have a projector and computer if we bring a thumb drive with the PowerPoint slides?  
We could also send it to you (or whoever you would like) later today.  
Let us know.

Thanks,  
Harry

Harry T. Stewart, P.E.  
Senior Associate  
Normandeau Associates, Inc.  
25 Nashua Road, Bedford, NH 03110  
(603) 637-1154 (direct) (603) 213-0391 (cell)  
[hstewart@normandeau.com](mailto:hstewart@normandeau.com)  
[www.normandeau.com](http://www.normandeau.com)

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**From:** Groff, Kimberly (DEP) [mailto:Kimberly.Groff@MassMail.State.MA.US]  
**Sent:** Monday, March 12, 2018 8:44 AM  
**To:** Jeanne Voorhees  
**Cc:** Dore, Bryan; Ralph Abele; Debbie Rutecki; Alana Spaetzel (aspaetzel@usgs.gov); Arsenault, Dan; Dave Armstrong (darmstro@usgs.gov); Carey, Richard (DEP); Stover, Toby; Mayor, Anna (DEP); Colarusso, Phil; Thursby, Glen; Hagy, Jim; Harry Stewart; Benjamin Jessup  
**Subject:** RE: EPA/DEP Meeting March 20, 2018, 10AM - Phase II Marine DO criteria- Chocorua Conference Room on the 7th floor

Thanks Jeanne. In the meantime don't hesitate to reach out with questions. Kim

*Sent from my Verizon Wireless 4G LTE Droid*

On Mar 12, 2018 6:26 AM, "Voorhees, Jeanne" <[voorhees.jeanne@epa.gov](mailto:voorhees.jeanne@epa.gov)> wrote:  
Hi Kim,

Thank you for sending along the attachments, and the discussion points. We're looking forward to the meeting next week. Let's hope all nor'easters are finished and that March starts behaving like a lamb.

Regards,  
Jeanne

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**From:** Groff, Kimberly (DEP) [<mailto:Kimberly.Groff@MassMail.State.MA.US>]  
**Sent:** Friday, March 09, 2018 5:14 PM  
**To:** Voorhees, Jeanne <[voorhees.jeanne@epa.gov](mailto:voorhees.jeanne@epa.gov)>  
**Cc:** Mayor, Anna (DEP) <[anna.mayor@state.ma.us](mailto:anna.mayor@state.ma.us)>; Abele, Ralph <[abele.ralph@epa.gov](mailto:abele.ralph@epa.gov)>; Dave Armstrong (<[darmstro@usgs.gov](mailto:darmstro@usgs.gov)> <[darmstro@usgs.gov](mailto:darmstro@usgs.gov)>); Thursby, Glen <[Thursby.Glen@epa.gov](mailto:Thursby.Glen@epa.gov)>; Hagy, Jim <[Hagy.Jim@epa.gov](mailto:Hagy.Jim@epa.gov)>; Alana Spaetzel (<[aspaetzel@usgs.gov](mailto:aspaetzel@usgs.gov)> <[aspaetzel@usgs.gov](mailto:aspaetzel@usgs.gov)>); Dore, Bryan <[Dore.Bryan@epa.gov](mailto:Dore.Bryan@epa.gov)>; Colarusso, Phil <[colarusso.phil@epa.gov](mailto:colarusso.phil@epa.gov)>; Thursby, Glen <[Thursby.Glen@epa.gov](mailto:Thursby.Glen@epa.gov)>; Arsenault, Dan <[Arsenault.Dan@epa.gov](mailto:Arsenault.Dan@epa.gov)>; Stover, Toby <[Stover.Toby@epa.gov](mailto:Stover.Toby@epa.gov)>; Debbie Rutecki (<[drutecki@normandean.com](mailto:drutecki@normandean.com)> <[drutecki@normandean.com](mailto:drutecki@normandean.com)>); Carey, Richard (DEP) <[richard.carey@state.ma.us](mailto:richard.carey@state.ma.us)>; Harry Stewart (<[hstewart@normandean.com](mailto:hstewart@normandean.com)> <[hstewart@normandean.com](mailto:hstewart@normandean.com)>); Benjamin Jessup <[benjamin.jessup@tetrattech.com](mailto:benjamin.jessup@tetrattech.com)>  
**Subject:** EPA/DEP Meeting March 20, 2018, 10AM - Phase II Marine DO criteria- Chocorua Conference Room on the 7th floor

Good afternoon Jeanne- I am sending along materials in advance of our planning discussion with **EPA on March 20, 2018 at the EPA Region 1 office in Boston from 10AM to 12 PM**. The detailed Agenda along with the documents that we plan to review with you during the meeting are attached.

In order to optimize the 2 hour time block that we have I am planning that we spend the first part of the meeting reviewing these attached materials with you. During the second half of the meeting we would like to focus the discussion on the following items:

**Discussion Points:**

- 1) MassDEP is considering the use of percent saturation for the DO criteria instead of concentration (mg/L). Percent saturation is a biologically relevant factor for hypoxia and represents what physically determines fish oxygen uptake from the surrounding water. It is expected to provide a better criterion for the ranges of temperatures and salinity that occur and are expected to occur in Mount Hope Bay and the Taunton River. Can the EPA provide any current guidance or recommendations for using percent saturation instead of concentration for DO criteria?
- 2) MassDEP intends to be protective of Atlantic Sturgeon using information from published literature and results from the DO tolerance analysis of the resident assemblage, which includes Atlantic Sturgeon as a potential resident in the study area. Protective DO criteria should allow sturgeons to naturally reoccur in the study area. We are requesting your feedback on this approach?
- 3) In the review of proposed DO criteria, how will the EPA apply the critical habitat designation under the Endangered Species Act to locations where Atlantic Sturgeon could occur?

Thank you in advance for your time in planning this meeting. We are looking forward to a productive discussion later this month. Best Regards, Kim

*Kimberly A. Groff, Ph.D.*  
Director, Watershed Planning Program  
Division of Watershed Management  
Bureau of Water Resources  
Massachusetts Department of Environmental Protection  
8 New Bond Street  
Worcester, MA 01606

Tel. 508-767-2876  
Cell. 617-447-0932  
[kimberly.groff@state.ma.us](mailto:kimberly.groff@state.ma.us)

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